REMARKS

Upon entry of the present Reply, claims 19-33 are pending in the present application.

Claims 1-18 are canceled herein, without prejudice to Applicant's right to refile these claims in a subsequent application claiming priority to the present application.

Claim 19 is amended herein.

New claims 31-33 are submitted herein.

Support for the amendment of claim 19 and for new claims 31-33 may be found, for example, at page 5, lines 3 to 26.

Applicant respectfully requests entry of the present Reply, reconsideration of the application and allowance of the claims. Applicant submits that the claims are allowable over the prior art of record for at least the following reasons.

Rejection of Claims 19-24 over Iacovangelo

Claims 19-24 stand rejected as anticipated by U.S. Patent No. 6,420,032 B1, Iacovangelo. The Examiner contended Iacovangelo discloses a multilayer film comprising a substrate 1, an interlayer 5 comprising plasma polymerized organosilicon, an adhesion promoting layer 2 of Ag or Al preferably formed by deposition or sputtering, a UV absorption metal oxide layer 3 such as zinc oxide, aluminum doped zinc oxide, or indium doped zinc oxide; and an organsiloxane abrasion resistant layer 4 overlying the metal oxide layer 3, citing the Abstract, col. 2, l. 27-46, col. 3, l. 9-42, col. 5, l. 23-55 and col. 6, l. 13 - col. 7, l. 12.

Applicant respectfully traverses this rejection.

Iacovangelo fails to disclose or suggest that the UV absorption metal oxide layer is a conversion coating as defined in Applicant's specification, for example, at page 5, lines 3-26, and in particular in the patents cited and incorporated by reference therein. As disclosed in U.S. Patent No. 6,087,017, conversion coating of a base metal such as

aluminum or its alloys is known as a process whereby the surface of the metal is chemically converted to a surface that more easily accepts applied coatings and increases the corrosion resistance of the metal. Col. 1, lines 17-21, '017 patent. Iacovangelo fails to disclose or suggest that the zinc oxide layer, with or without doping, could or might act as a conversion coating.

Applicant amended claim 19 to specify that the corrosion inhibiting inorganic layer is a conversion coating.

Accordingly, Applicant's claims 19-24 cannot be anticipated by Iacovangelo. The Examiner is respectfully requested to reconsider and withdraw the rejection of Applicant's claims 19-25 over Iacovangelo.

Rejection of Claims 19-30 over Shimabukuro et al. in view of Iacovangelo

Claims 19-30 stand rejected as obvious over U.S. Patent No. 4,457,598, to Shimabukuro et al., in view of Iacovangelo. In pertinent part, the Examiner contended that

> Shimabukuro et al teach a reflector comprising a base body, a reflecting layer made of aluminum formed on one surface of the base body by vacuum deposition, a light-transmitting water-insoluble inorganic oxide layer formed by vacuum deposition on the aluminum reflecting layer, and a protective sealing layer on the surface of the inorganic oxide layer; wherein the oxide layer may be zirconium oxide, silicon dioxide, silicone monoxide, aluminum oxide, indium oxide; wherein the base body may be an electrically conductive substrate whose surface is coated with a dielectric material such as a metal or graphite substrate coated with an inorganic compound such as silica, polysiloxane, or polyester paint; and wherein a smoothing layer may be provided on the surface of the base body by hardening and baking an inorganic compound such as silicon oxide paint, polycarbonate paint or polysiloxane paint (Abstract; Figure 1; Col. 2, line 22-Col. 3, line 5 1; Examples.) Hence, Shimabukuro et al disclose: metal base body coated with inorganic coating/smoothing layer of polycarbonate or polysiloxane paint (polymeric layer overlying the inorganic coating)/vacuum deposited aluminum/inorganic oxide layer such as aluminum oxide/protective sealing. Though Shimabukuro et al teach

the use of a protective sealer on the coated substrate, Shimabukuro et al do not teach the use of an organosiloxane topcoat layer however, it is known in the art that an organosiloxane topcoat layer can provide over a metal oxide layer to provide improved protective properties such as abrasion resistance as taught by Iacovangelo, and hence, one having ordinary skill in the art at the time of the invention would have been motivated to utilize a polysiloxane protective topcoat for the invention taught by Shimabukuro et al.

Applicant traverses the rejection of claims 19-30 over Shimabukuro et al. in view of Iacovangelo for the following reasons.

With respect to claims 19-24, Applicant respectfully submits that the amendment of claim 19 to specify the corrosion inhibiting layer is a conversion coating fully distinguishes these claims over both Shimabukuro et al. and Iacovangelo. Similarly, new claims 31-33 distinguish over both references for the same reason.

With respect to claims 25-30, Applicant respectfully submits that the invention claimed in these claims would not have been obvious over the asserted combination of references for at least the following reasons.

Applicant respectfully disagrees with the Examiner's interpretation of Shimabukuro et al. The reflector disclosed by Shimabukuro et al. comprises a base, a smoothing layer formed adjacent to the base, an aluminum reflecting layer overlying the base and a light transmitting/protective layer overlying the reflective layer. The smoothing layer comprises a high polymer paint such as a polycarbonate, polyallylcarbonate, epoxy, polyimide or polysiloxane paint. The protective layer comprises an inorganic oxide such as a metal oxide.

The reference fails to teach either two corrosion inhibiting layers overlying the metal layer or a protective layer overlying a corrosion inhibiting layer as claimed by Applicant in claims 25-30. As admitted by the Examiner in the previous Office Action, Shimabukuro et al. fails to teach a second corrosion inhibiting layer between the substrate and the polymeric layer. Applicant submits that the contention that the claims

25-30 would have been obvious over Shimabukuro et al. in view of Iacovangelo has not been established by the Examiner. Consequently, withdrawal of the rejection of claims 25-30 is believed to be warranted and is respectfully requested.

Shimabukuro et al. fails to disclose two corrosion inhibiting layers as claimed in claims 25-33. In the present Office Action, although it is not clearly identified, the Examiner appears to contend that Shimabukuro et al. teaches two corrosion inhibiting layers, since Shimabukuro et al. is the primary reference and Iacovangelo is only applied in the rejection for the teaching of the final protective layer. However, Applicant is aware of no teaching or suggestion in Shimabukuro et al. that there are two corrosion inhibiting layers as claimed. Applicant respectfully submits that the layers disclosed by Shimabukuro et al. would not be understood to constitute two corrosion inhibiting layers as claimed, in the absence of Applicant's disclosure as a guide.

If the Examiner intends to rely upon an assertion that Shimabukuro et al. discloses layers which would be considered by a person of ordinary skill in the art to constitute corrosion inhibiting layers, Applicant respectfully requests the Examiner to substantiate this contention with evidence from the prior art.

Shimabukuro et al. fails to disclose a protective layer. Shimabukuro et al. discloses that the exemplary metal oxide layer, i.e., zinc oxide, may have micropores in it (col. 3, lines 15-17), and that this layer may be treated with a sealing agent which includes water or a carboxylate of an iron family element of low valence, Fe^{+2}, Co^{+2} or Ni^{+2} (col. 3, lines 17-21). Shimabukuro et al. discloses that to seal the micropores, the aqueous solution of carboxylate is applied to the metal oxide layer. This treatment does not apply or from a separate layer. It only results in closing or sealing of the micropores. See, col. 4, lines 12-23. At this point, the reflector is complete. See, col. 4, lines 24-26. There is neither disclosure nor any suggestion that any additional layer should be applied over the sealed layer.

Thus, the Examiner's statement that "Shimabukuro et al teach the use of a protective sealer on the coated substrate" is not correct in the implication that the reference teaches application of a further layer over the metal oxide. Shimabukuro et al. neither teach nor suggest any layer at all over the metal oxide. Thus, there can be no motivation in Shimabukuro et al. to modify the article made by addition of an outer layer.

The Examiner contended that based on the teaching of an organsiloxane topcoat layer by Iacovangelo, a person of ordinary skill in the art would have been motivated to utilize a polysiloxane protective topcoat for the article of Shimabukuro et al. Applicant respectfully disagrees with this contention.

Iacovangelo relates to coatings for polymeric materials such as polycarbonate windows for autos, buildings, or display devices. Such polymeric materials are disclosed as being susceptible to damage by UV radiation. Iacovangelo discloses use of metal oxides such as ZnO as UV absorption layers, and of an adhesion promoting layer to help maintain adhesion of such UV absorbing layers. Iacovangelo further discloses use of an abrasion resistant outer layer.

Iacovangelo does not disclose or suggest that it the outer layer should be added to a reflector such as that of Shimabukuro et al. As noted, Iacovangelo relates to coatings for polymeric materials for use as windows, etc. There is nothing in Iacovangelo which would lead a person of ordinary skill to select the outer layer only from Iacovangelo for application over the already-sealed outer layer of Shimabukuro et al., or as a substitute for the sealing treatment disclosed by Shimabukuro et al.

Furthermore, Iacovangelo does not remedy the shortcomings of Shimabukuro et al. noted above.

The Examiner based the obviousness contention on an asserted motivation felt by one of ordinary skill in the art to use the layers as asserted, but failed to identify any disclosure or suggestion in the references which would lead to the combination.

Shimabukuro et al. teaches that the inorganic layer is a protective layer, so there would be no need and no motivation to add a second protective layer. If the protective layer of Iacovangelo is substituted for the protective layer of Shimabukuro et al., then there would be no metal oxide layer, again negating the examiner's contention that the proposed combination would lead to the present invention.

At best, the Examiner has shown that the reference teachings *could* be combined, but has not shown a teaching that they *should* be combined. Thus, the asserted combination appears to be the result of hindsight reconstruction of Applicant's invention, based on Applicant's disclosure, not on what was in the prior art at the time the invention was made.

Furthermore, the references do not contain any teaching which would lead a person to have a reasonable expectation of success. While selection of the elements may be possible with the aid of hindsight, there is nothing to suggest that the combination of the teachings of the two references would provide a person with an expectation of success in reaching the claimed invention, since there is no reason to select the particularly claimed combination of elements.

Accordingly, Applicant respectfully submits that the presently claimed invention as described in claims 25-30 would not have been obvious over the asserted combination of Shimabukuro et al. and Iacovangelo.

In addition, the asserted combination of Shimabukuro et al. and Iacovangelo fail to teach all of the elements of the claimed invention. Applicant's claims recite "a multi-layer coating having a polished effect". Neither of the cited references teach that the disclosed structures provide a polishing effect for the surface of the article to which they are applied. For this additional reason, the asserted obviousness is without proper basis, since all the elements of the claimed invention are not disclosed.

Conclusion

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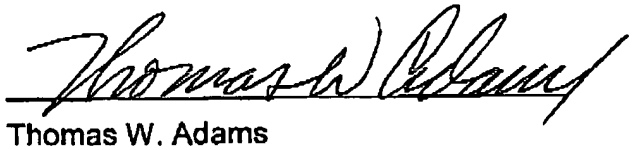
For all the foregoing reasons, Applicant respectfully submits that the presently claimed invention fully distinguishes over the prior art of record, whether taken alone or in combination. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the asserted rejections of Applicant's claims and to issue a Notice of Allowance therefor.

In the event issues arise as a result of the filing of this paper, or remain in the prosecution of this application, Applicants request that the Examiner telephone the undersigned attorney to expedite allowance of the application. Should a Petition for Extension of Time be necessary for the present Reply to the outstanding Office action to be timely filed (or if such a petition has been made and an additional extension is necessary) petition therefor is hereby made and, if any additional fees are required for the filing of this paper, the Commissioner is authorized to charge those fees to Deposit Account #18-0988, Docket No. AREWP0105US.

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP



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